Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1-71. (canceled)

72. (Currently amended) A bone-enhancing composite comprising synthetic apatite and at least one of ~~supplementary bioactive agent selected from~~ a biocompatible bioactive polymer and an anti-resorptive agent added *ab initio*, wherein the synthetic apatite comprises ionic calcium, phosphate, carbonate and at least one amino acid in monomeric or polymeric form.

73. (Currently amended) The bone-enhancing composite according to claim 72 wherein the biocompatible bioactive polymer is selected from a natural biocompatible bioactive polymer and a synthetic biocompatible bioactive polymer.

74. (Previously presented) The bone-enhancing composite according to claim 73 wherein said natural polymer is a polysaccharide.

75. (Previously presented) The bone-enhancing composite according to claim 74 wherein said polysaccharide is a glycosaminoglycan.

76. (Previously presented) The bone-enhancing composite according to claim 75 wherein said glycosaminoglycan is heparin or a heparin derivative.

77. (Previously presented) The bone-enhancing composite according to claim 72 further comprising at least one therapeutic agent.

78. (Previously presented) The bone-enhancing composite according to claim 77 wherein the at least one therapeutic agent is selected from the group consisting of antibiotics, antiviral agents, chemotherapeutic agents, anti-rejection agents, analgesics and analgesic

combinations, anti-inflammatory agents, hormones, growth factors and cytokines.

79. (Previously presented) The bone-enhancing composite according to claim 78 wherein said at least one therapeutic agent is a growth factor.

80. (Previously presented) The bone-enhancing composite according to claim 79 wherein said growth factor is a fibroblast growth factor or an active fragment or variant thereof.

81. (Previously presented) The bone-enhancing composite according to claim 72 wherein said synthetic apatite is a poorly crystalline apatite.

82. (Currently amended) The bone-enhancing composite according to claim 72 wherein said synthetic apatite is a poorly crystalline apatite and said biocompatible bioactive polymer~~at least one supplementary bioactive agent~~ is heparin or a heparin derivative.

83. (Previously presented) The bone-enhancing composite according to claim 82 further comprising fibroblast growth factor or an active fragment or variant thereof.

84. (Previously presented) The bone-enhancing composite according to claim 72 wherein the anti-resorptive agent is a bisphosphonate or a pharmaceutically acceptable salt or ester thereof.

85. (Previously presented) The bone-enhancing composite according to claim 81 wherein said poorly crystalline apatite having an X-ray diffraction pattern comprising a peak at a 2 theta value of about 26° and an undifferentiated peak at 2 theta values of about 31° to about 33°.

86. (Currently amended) A method for treating orthopedic, periodontal and craniofacial indications comprising administering to a subject in need thereof a therapeutically effective amount of a composition comprising synthetic apatite and at least one of ~~supplementary bioactive agent selected from~~ a biocompatible bioactive polymer and an anti-resorptive agent added *ab initio*, wherein the synthetic apatite comprises ionic calcium, phosphate, carbonate and at least one amino acid in monomeric or polymeric form.

87. (Currently amended) The method according to claim 86 wherein said biocompatible bioactive polymer is a glycosaminoglycan.

88. (Previously presented) The method according to claim 87 wherein said glycosaminoglycan is heparin or a heparin derivative.

89. (Previously presented) The method according to claim 86 further comprising at least one therapeutic agent.

90. (Previously presented) The method according to claim 89 wherein the at least one therapeutic agent is selected from the group consisting of antibiotics, antiviral agents, chemotherapeutic agents, anti-rejection agents, analgesics and analgesic combinations, anti-inflammatory agents, hormones, growth factors and cytokines.

91. (Previously presented) The method according to claim 90 wherein said at least one therapeutic agent is a growth factor.

92. (Previously presented) The method according to claim 91 wherein said growth factor is a fibroblast growth factor or an active fragment or variant thereof.

93. (Currently amended) The method according to claim 86 wherein said synthetic apatite is a poorly crystalline apatite and said biocompatible bioactive polymer~~at least one supplementary bioactive agent~~ is heparin or a heparin derivative.

94. (Previously presented) The method according to claim 93 further comprising fibroblast growth factor or an active fragment or variant thereof.

95. (Previously presented) The method according to claim 86 wherein the anti-resorptive agent is a bisphosphonate or a pharmaceutically acceptable salt or ester thereof.

96. (Currently amended) A method of preparing a bone enhancing composite comprising synthetic apatite and at least one of ~~supplementary bioactive agent selected from~~ a biocompatible bioactive polymer and an anti-resorptive agent added *ab initio*, wherein the synthetic apatite comprises ionic calcium, phosphate, carbonate and at least one

amino acid in monomeric or polymeric form, the method comprising the steps of:

a) preparing a liquid mixture comprising ionic calcium, phosphate, at least one amino acid in either monomeric or polymeric form, carbonate, at least one of ~~supplementary bioactive agent selected from~~ a biocompatible bioactive polymer and an anti-resorptive agent, optionally further comprising a therapeutic agent;
b) subjecting said mixture to microwave irradiation;
c) quenching said irradiated mixture;
d) filtering said quenched mixture so as to separate between the filtrate and a cake;
e) drying said cake;
f) grinding said cake into a powder.

97. (Previously presented) The method according to claim 98 further comprising the following steps:

g) sterilizing said powder;
h) wetting said sterilized powder with a solution optionally comprising at least one therapeutic agent;
i) preparing said wetted powder for administration.

98. (Currently amended) The method according to claim 96 wherein the biocompatible bioactive polymer is heparin or a heparin derivative.

99. (Previously presented) The method according to claim 96 further comprising at least one therapeutic agent.

100. (Previously presented) The method according to claim 99 wherein the at least one therapeutic agent is selected from the group consisting of antibiotics, antiviral agents, chemotherapeutic agents, anti-rejection agents, analgesics and analgesic combinations, anti-inflammatory agents, hormones, growth factors and cytokines.

101. (Previously presented) The method according to claim 100 wherein said at least one therapeutic agent is a growth factor.

102. (Previously presented) The method according to claim 101 wherein said growth factor is a fibroblast growth factor or an active fragment or variant thereof.

103. (Previously presented) The method according to claim 96 wherein the anti-resorptive agent is a bisphosphonate or a pharmaceutically acceptable salt or ester thereof.

104. (Previously presented) The method according to claim 96 wherein said synthetic apatite is a poorly crystalline apatite having an X-ray diffraction pattern comprising a peak at a 2 theta value of about 26° and an undifferentiated peak at 2 theta values of about 31° to about 33°.